



MORNINGSIDE PARK IMPROVEMENTS

CITYWIDE STORMWATER MASTER PLAN
NEIGHBORHOOD DRAINAGE PLAN
(CDM SMITH)

MORNINGSIDE PARK MASTER PLAN
(AECOM)

MORNINGSIDE PARK DRAINAGE
MANAGEMENT PLAN (COASTAL
SYSTEMS INTERNATIONAL)

MORNINGSIDE PARK AQUATIC CENTER
(DIAZ CARRENO SCOTTI & PARTNERS)

MORNINGSIDE PARK SHORELINE
IMPROVEMENTS
(COASTAL SYSTEMS INTERNATIONAL)



MORNINGSIDE PARK IMPROVEMENTS

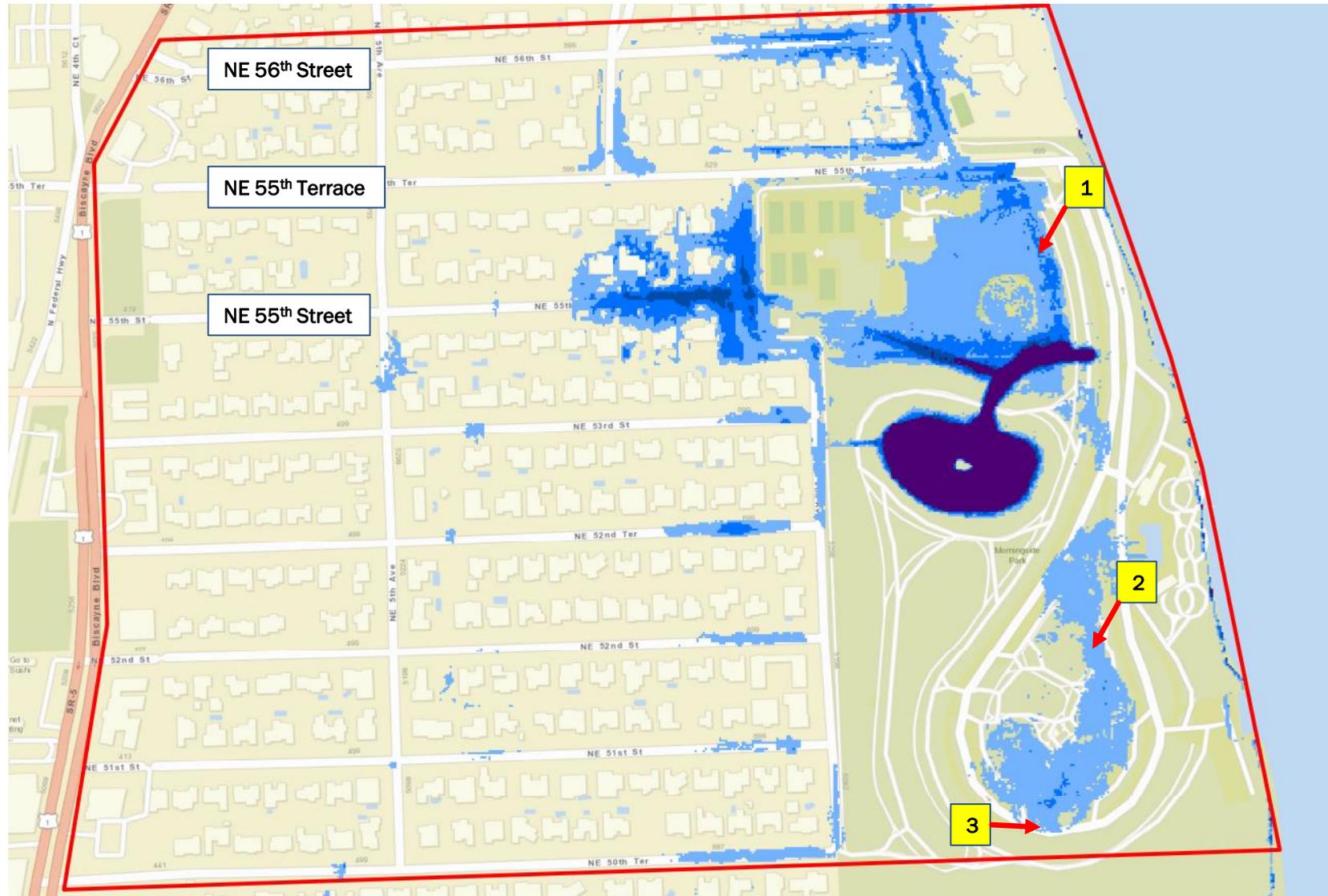
- **Citywide Stormwater Master Plan (CDM Smith) – Neighborhood Drainage Plan**
- Morningside Park Master Plan (AECOM)
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- Morningside Park Aquatic Center (Diaz Carreno Scotti & Partners)
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NEIGHBORHOOD DRAINAGE MANAGEMENT PLAN

(FROM CITYWIDE STORMWATER
MASTER PLAN)

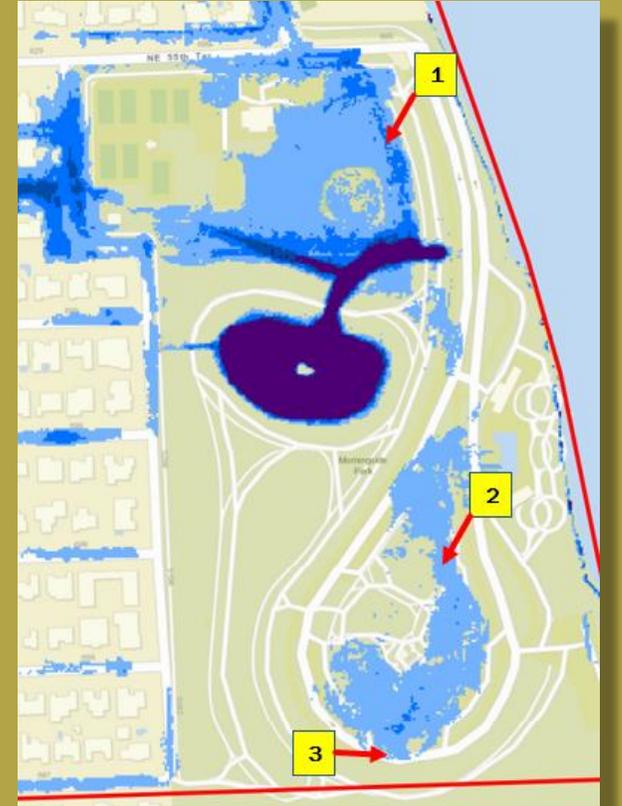
FLOODING CONDITIONS **WITHOUT** DRAINAGE IMPROVEMENTS

CONDITIONS FROM
MAY 2021 STORM EVENT





VIEW #1



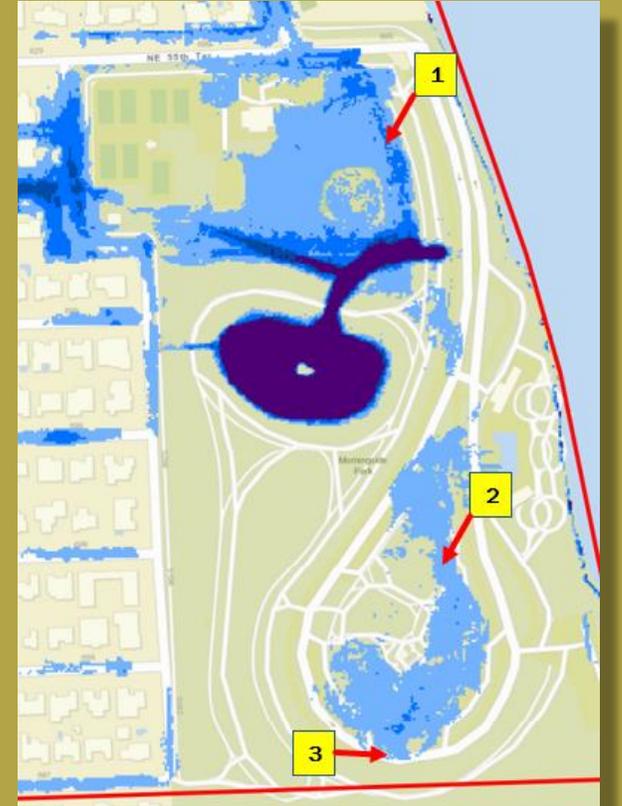


VIEW #2





VIEW #3



NEIGHBORHOOD DRAINAGE MANAGEMENT PLAN

(FROM CITYWIDE STORMWATER
MASTER PLAN)

FLOODING CONDITIONS WITH DRAINAGE IMPROVEMENTS

REDUCE THE DURATION AND
DEPTH OF FLOODING



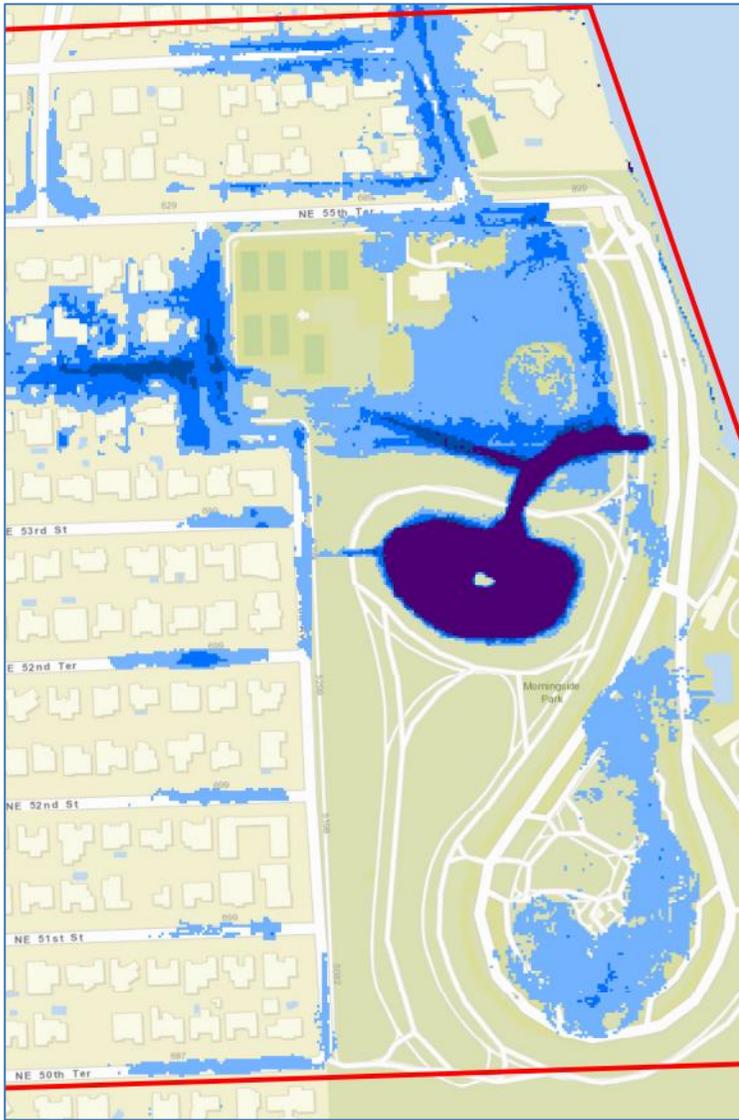
NEIGHBORHOOD DRAINAGE MANAGEMENT PLAN

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MASTER PLAN)

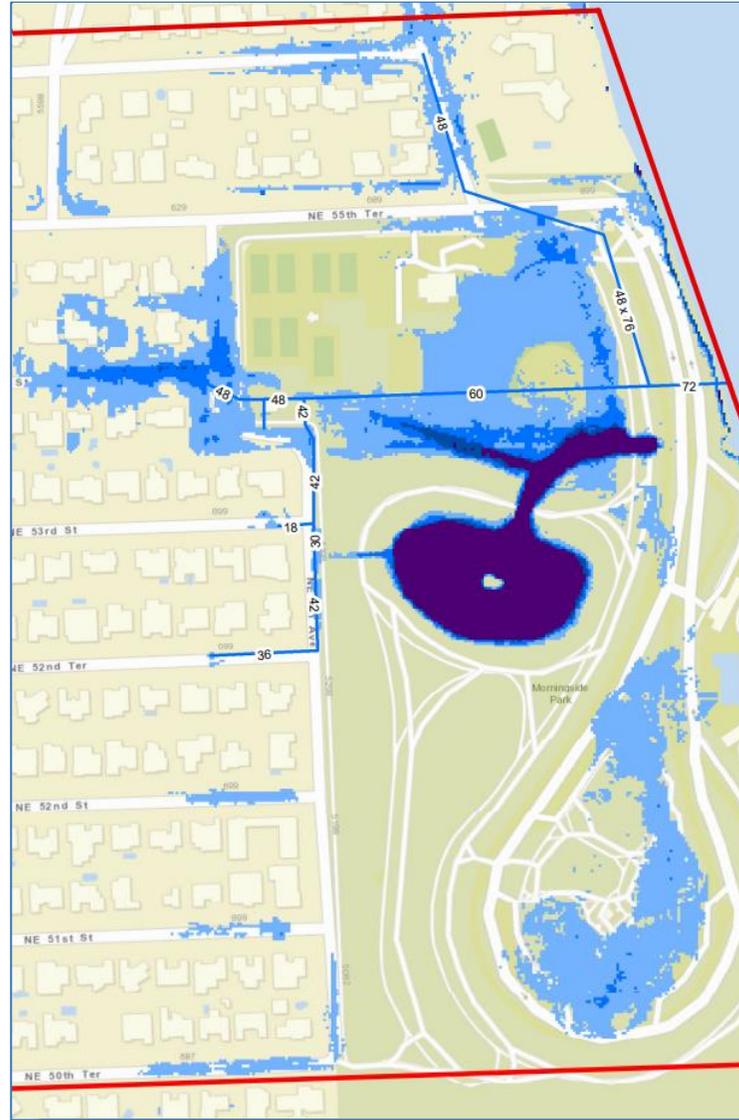
FLOODING CONDITIONS WITH DRAINAGE IMPROVEMENTS AND PUMP STATION

SIGNIFICANT REDUCTION OF
FLOODING CONDITIONS





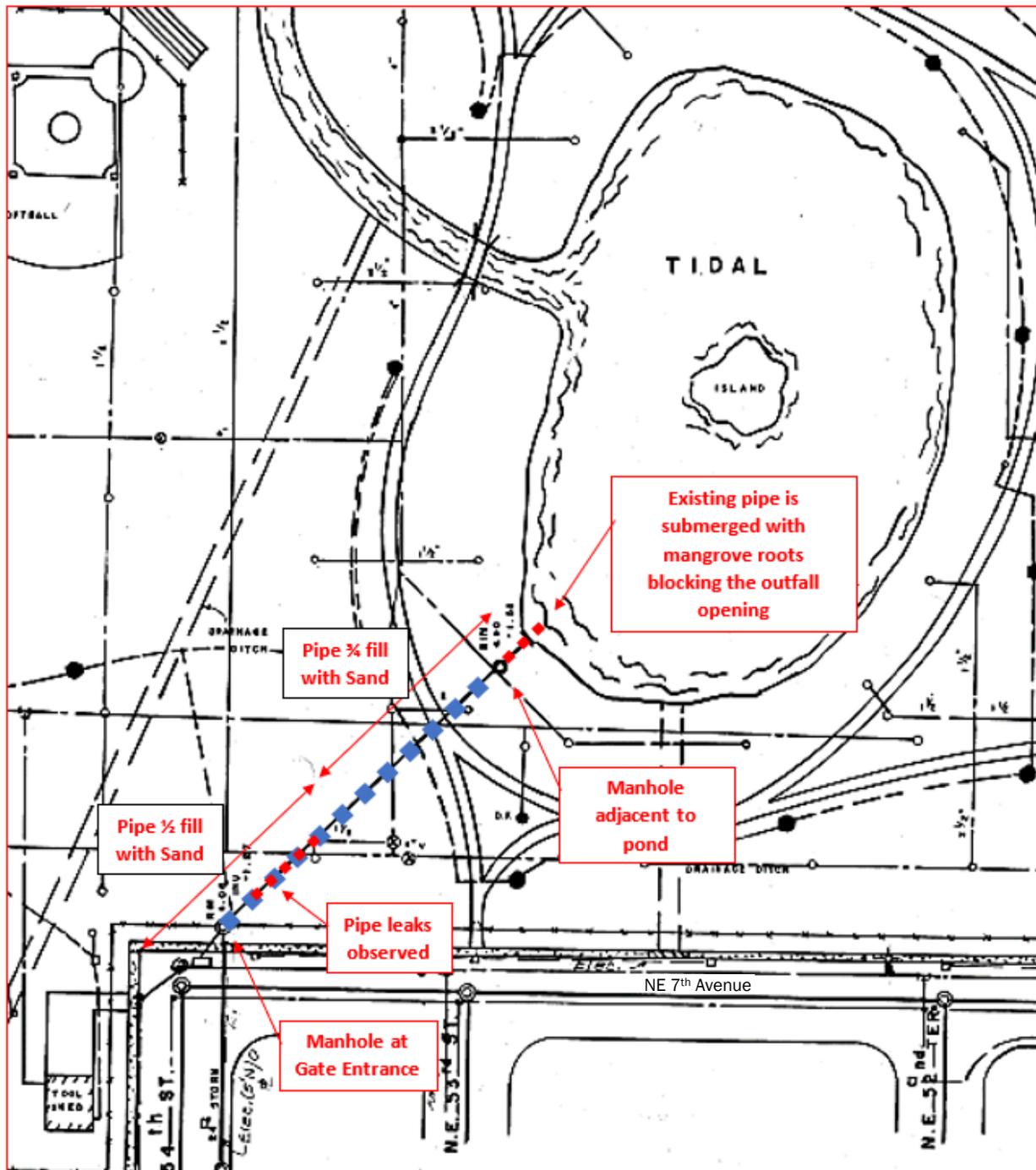
EXISTING CONDITIONS



OUTFALL & DRAINAGE IMPROVEMENTS



PUMP STATION & INJECTION WELLS



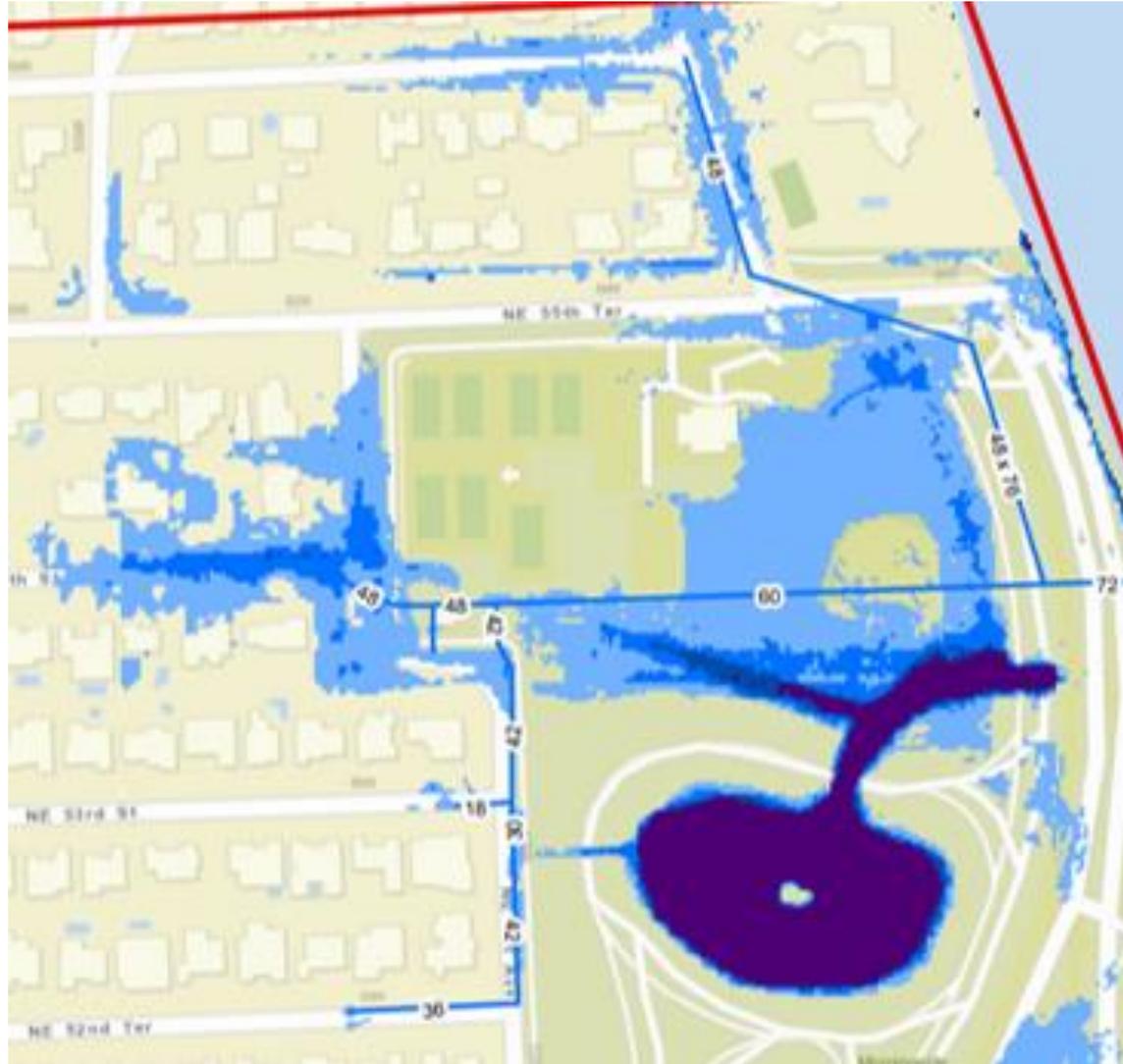
NEIGHBORHOOD DRAINAGE MANAGEMENT PLAN (FROM CITYWIDE STORMWATER MASTER PLAN)

DRAINAGE IMPROVEMENT PHASING PLAN

Phase I

Continue pipe cleaning operations to the existing drainage system to increase drainage efficiency into the pond.

- 200 LF existing pipe collects runoffs from NE 7th Avenue and drains into existing pond.
- Previous Inspections revealed sand and muck inside pipe.
- Mangrove roots block the opening of the outfall, restricting flow
- Annual Cleaning Cost including sealing, debris disposal and CCTV inspection - \$45,000



NEIGHBORHOOD DRAINAGE MANAGEMENT PLAN (FROM CITYWIDE STORMWATER MASTER PLAN)

DRAINAGE IMPROVEMENT PHASING PLAN

Phase II

Outfall installation and adjacent drainage systems to improve drainage in the vicinity of NE 55th street, and NE 7th Avenue.

- Large 60"/72" Outfall Pipe to be installed at NE 7th Avenue and NE 55th Street, bypassing mangrove pond and extending out to the Bay
- Drainage Collection System installed along N Bayshore Drive and NE 7th Avenue
- Probable Construction Cost Estimate: \$3.0 - \$3.5 Mil.

NEIGHBORHOOD DRAINAGE MANAGEMENT PLAN (FROM CITYWIDE STORMWATER MASTER PLAN)

DRAINAGE IMPROVEMENT PHASING PLAN

Phase III

Install exfiltration trenches to capture upland runoff and percolate into the ground, reducing surface flows toward NE 7th Avenue and Morningside Park.

- Large exfiltration trench systems to be installed on all streets at/near NE 5th Avenue, from NE 50th Terrace to NE 56th Street
- Anticipated Construction cost - \$13.0 Mil.



NEIGHBORHOOD DRAINAGE MANAGEMENT PLAN (FROM CITYWIDE STORMWATER MASTER PLAN)

DRAINAGE IMPROVEMENT PHASING PLAN

Phase IV

Install additional exfiltration trenches and collection piping throughout the northern and southern boundaries of the neighborhood along with a pump station at Morningside Park.

- Additional exfiltration trench systems to be installed north of NE 56th Street with additional collection system piping north/south of Morningside Park to convey water to a new pump station
- New pump station and drainage injection wells to be installed at Morningside Park
- Anticipated Construction cost for Pump Station, Wells, and Additional Piping - \$18.0 Mil.





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MORNINGSIDE PARK COMMUNITY PARTICIPATION FIRST PUBLIC WORKSHOP

- Public workshop held on June 13, 2017, at Morningside Park
 - 70+ total participants
- Input provided during presentation, by comment cards and on park base map

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- Public workshop held on June 13, 2017, at Morningside Park
- 70+ total participants
- Input provided during presentation, by comment cards and on park base map
- Over 150 Comments were received





MORNINGSIDE PARK COMMUNITY PARTICIPATION SECOND PUBLIC WORKSHOP

- Public workshop held on October 30, 2017, at Morningside Park
 - 30+ participants
- Input provided during presentation, by comment cards
 - 35 comment cards were filled



MORNINGSIDE PARK COMMUNITY PARTICIPATION THIRD PUBLIC WORKSHOP

- Public workshop held on October 21, 2019, at Morningside Park
 - 50+ participants
- Input provided during presentation, by comment cards
 - 36 comment cards were filled





PARK MASTER PLAN

(Presented to the
Community in October
2019)



City of Miami

Legislation

Resolution

City Hall
3500 Pan American Drive
Miami, FL 33133
www.miamigov.com

Enactment Number: R-20-0009

File Number: 7124

Final Action Date: 1/23/2020

A RESOLUTION OF THE MIAMI CITY COMMISSION DIRECTING THE CITY MANAGER TO DESIGN A CAPITAL IMPROVEMENT PLAN REGARDING MORNINGSIDE PARK THAT WILL KEEP MORNINGSIDE POOL LOCATED AT ITS CURRENT LOCATION WITHIN MORNINGSIDE PARK.

WHEREAS, the City of Miami ("City") is in the process of designing capital improvements to Morningside Park; and

WHEREAS, Morningside Park has a pool ("Pool") located near the waterfront; and

WHEREAS, it has been determined that keeping the Pool located near the waterfront or moving it more inland would be cost neutral; and

WHEREAS, residents have expressed a desire to have the Pool remain at its current location; and

WHEREAS, the City Commission wishes to keep costs of improving the park feasible while taking the residents' concerns into consideration while improving all City parks, including Morningside Park;

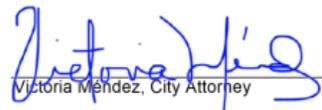
NOW, THEREFORE, BE IT RESOLVED BY THE COMMISSION OF THE CITY OF MIAMI, FLORIDA:

Section 1. The recitals and findings contained in the Preamble to this Resolution are adopted by reference and incorporated as if fully set forth in this Section.

Section 2. The City Manager is hereby directed to design a capital improvement plan to Morningside Park that will keep the Pool at its current location.

Section 3. This Resolution shall become effective immediately upon its adoption.

APPROVED AS TO FORM AND CORRECTNESS:


Victoria Méndez, City Attorney 1/31/2020

■ JANUARY 23, 2020

City Resolution R-20-0009 – Section 2. The City Manager is hereby directed to design a Capital Improvement Plan to Morningside Park that will keep the Pool at its current location.



BASE OPTION

Boater and
Public Entrance
Roads Together



C2 OPTION

Boater and
Public Entrance
Separate Roads

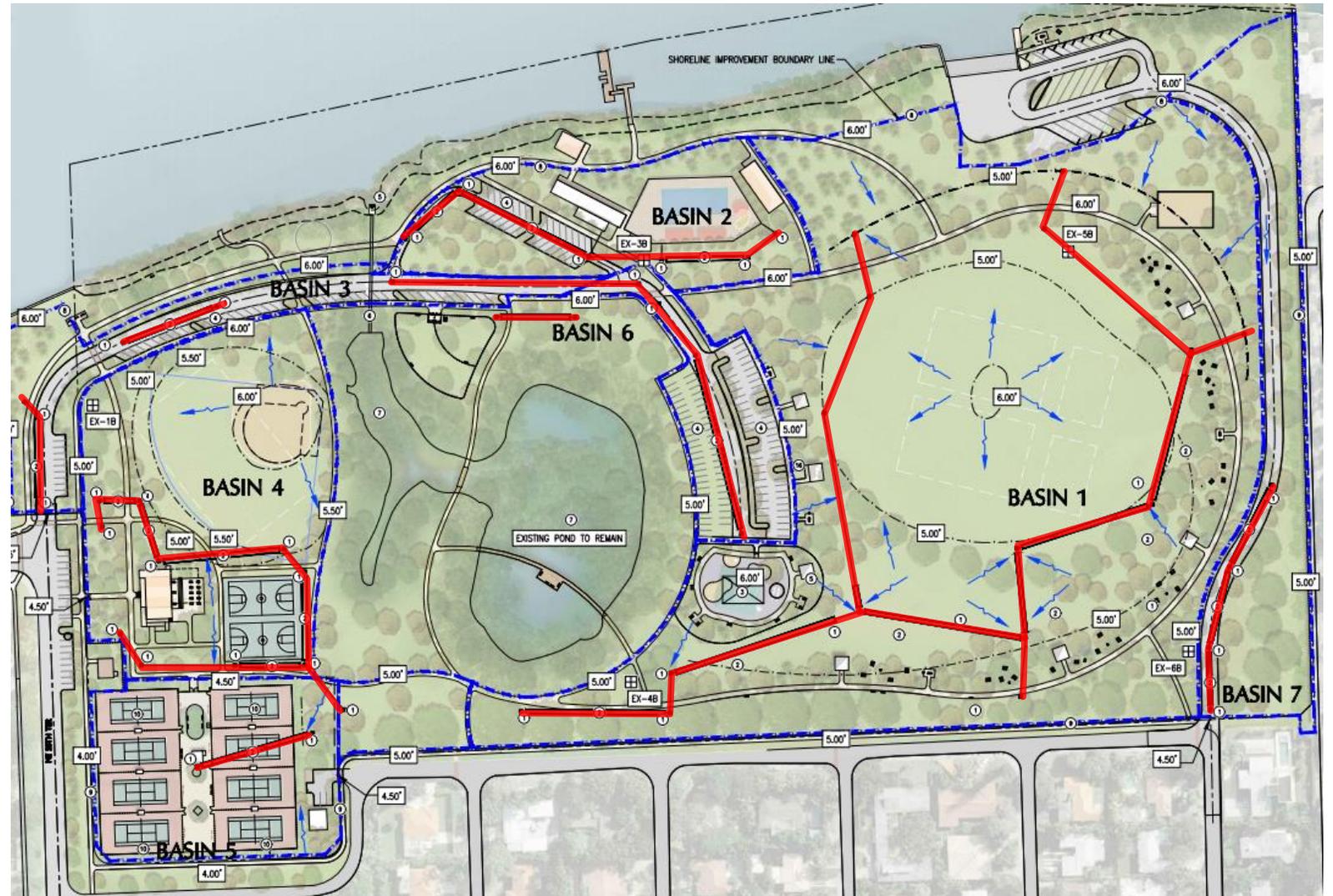


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- 43 catch basins
- 1,309 linear feet of storm pipe
- 3,160 linear feet of seepage system
- Proposed Drainage System Installations

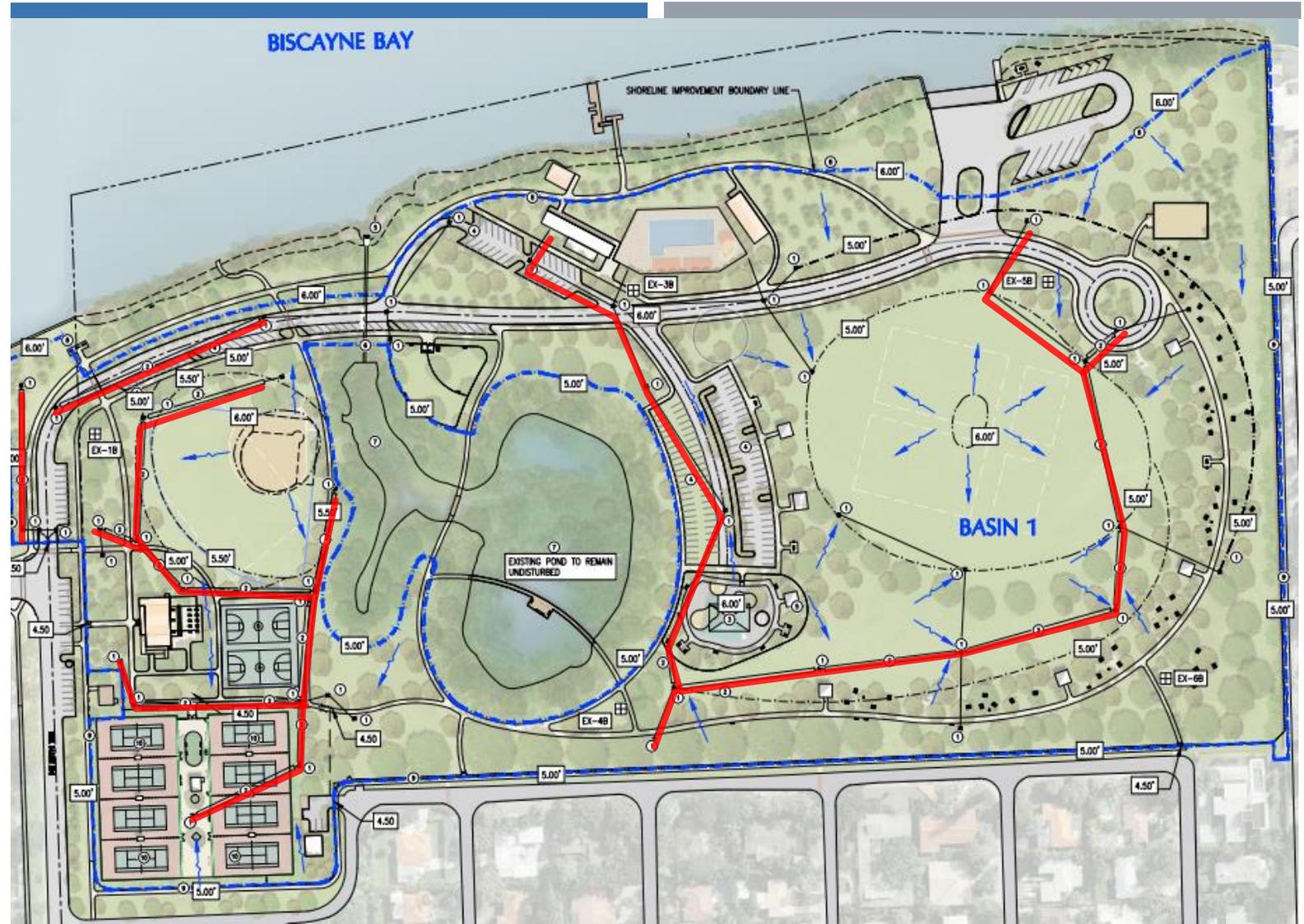
MORNINGSIDE PARK DRAINAGE MANAGEMENT PLAN – C2 OPTION LAYOUT



DRAINAGE LAYOUT – C2 OPTION

- 41 catch basins
- 2,161 linear feet of storm pipe
- 3,000 linear feet of seepage system
- Proposed Drainage System Installations

MORNINGSIDE PARK DRAINAGE MANAGEMENT PLAN – BASE OPTION LAYOUT



DRAINAGE LAYOUT – BASE OPTION



Post Storm Event

Morningside Park
Saturday November 20, 2021



Post Storm Event

Morningside Park
Saturday November 20, 2021



Post Storm Event

Morningside Park
Saturday November 20, 2021



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ZONE VE
 (11.00')

ZONE AE
 (10.00')

ZONE AE
 (9.00')

PARK MASTER PLAN

(Presented to the
 Community in 2019)





City of Miami
Legislation
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ZONE VE
[11.00']

ZONE AE
[10.00']

R-20-0009

Aquatic Pool
Revert to Original
Location
(May 2020)

ZONE AE
[9.00']



Mr. Jorge L. Mora, Assistant Director
Morningside Aquatic Center
Renovation Option Analysis
09/22/2021
Page 2 of 2

DRAFT ONLY 09/22/2021
Consultant's
Renovation Option
Analysis

Given the above, and following the methodology indicated in the attached documents, in our professional opinion, the existing facility cannot be renovated and comply with Codes and Regulations. As such, we conclude that the only option for this facility is full replacement. Our analysis also indicates that the replaced facility, to comply with Codes and Regulations, needs to have the Finished Floor Elevations (FFE) based on the following items—please note that elevations indicated are referenced to the National Geodetic Vertical Datum (NGVD):

1. The bottom of the lowest horizontal member of the pool structure must be at Base Flood Elevation (BFE) + 1ft, which in Zone VE corresponds to an elevation of +11.00ft. This requirement is based on a Flood Design Class 2 for this Building and Structure per ASCE 24-14 Table 1-1 and Coastal High Hazard Areas (Zone V). Currently the grade elevation in the area surrounding the existing facility varies from a minimum +4.46ft. to a maximum of +5.80ft. according to the May 4, 2015, Boundary Survey (Pgs. 2 & 3 of 10 completed by Triangle Surveying and Mapping Inc.
2. The replacement pool will have no diving components and a maximum water depth of 6ft. At this location it will probably be supported by piles. The floor of the pool structure will be approx. a 1ft. thick concrete slab (same as the existing), and the top of the pool wall perimeter gutter head (normally 1ft. above water level) will be approx. 4in (0.33ft.) above the adjacent deck (same as the existing). As such the FFE of the new pool deck will be 11ft (BFE+1ft) + 1ft (pool floor slab thickness) + 6ft (water depth) + 1ft (water level to top of gutter) – 0.33ft (step down from top of gutter to deck) = +18.67ft.
3. Considering a similar structural framing layout as the existing bathhouse, then the minimum FFE of both the new bathhouse and pool-pump building will be +11ft (BFE+1ft.) + 2ft. (total depth of floor structure) = +13.00ft., which is 5.67ft lower than the pool deck.
4. To address the 5.67ft. difference in FFE would require installing ADA compliant ramps and stairs from the bathhouse/pool-pump building to the pool deck levels or raising the FFE of the bathhouse/pool-pump building to match the pool deck at +18.67ft. The latter is the preferred method for cost, simplicity and accessibility. It is worth noting that the FFE of the existing bathhouse is +8.30ft whereas that of the pool deck varies between +8.22ft. and 8.48ft. because of slopes to drain water. To add some dimensional perspective, to make the replacement facility meet minimum Code elevations, will require the buildings to be approx. 10.33ft higher than they are now. Beside handicap ramping and stairs, this dimensional difference will require installation of an elevator.

If you have any questions or need clarifications, please do not hesitate to call or email me at your convenience.

Sincerely,

Diaz Carreño Scotti & Partners Inc.



Alberto J. Carreño, PE
Principal

/ajc

Attachments (9)

Cc: Mr. Brandon De Caro (CIP); Mr. Keith Ng (CIP); Mr. Gonzalo Scotti (DCSP)

DIAZ • CARREÑO • SCOTTI + PARTNERS, INC. ARCHITECTS • ENGINEERS • PLANNERS • INTERIORS
12124 SW 131 AVENUE, MIAMI, FL 33186 • PH (305) 256-9071 • FAX (305) 256-9073 • WWW.DCSP-AE.COM

MORNINGSIDE PARK AQUATIC CENTER 40-B213511



Consultant's
Renovation Option
Analysis

September 22, 2021

Mr. Jorge L. Mora, Assistant Director
City of Miami Capital Improvements Program
444 SW 2nd Avenue, 8th Floor
Miami, Florida, 33120

RE: Morningside Aquatic Center-City of Miami Project. #B213511. Consultant's Renovation Option Analysis.

Dear Mr. Mora:

Whether to renovate or replace, and if replace, where to locate the existing pool, bath house and support facilities have been the issues that we have been aware of at the Morningside Park Aquatic Center since the first structural investigation of the facility was completed in May 2016.

When the City of Miami Commission voted on 01/23/2020 to have the facility, if replaced, remain at the same location as the existing, where to site a replacement facility elsewhere in the park became a moot point and thus not addressed herein. As such this narrative is limited to whether the facility can be renovated or not at its current bayside location, and why, or whether it must be replaced at the same location, and how. To that end I offer the following statements and conclusions for your consideration and use:

Although in any facility damaged structural components can be repaired or replaced; finishes redone; spaces remodeled; additions made; equipment updated; access, parking as well as all other building or site components renovated, all the construction drawings and specifications for the work, must be completed compliant to applicable Codes and Regulations, after which they must be submitted to the Authorities Having Jurisdiction (AHJ's) for approval so a Building Permit can be issued. Unfortunately, and because the existing Aquatic Center facility is located bayside in what is determined to be a Coastal Flood Zone (Zone VE) with velocity hazard (wave action), in our professional opinion, if this existing facility were to be renovated, the completed work would be in violation of, as a minimum, the Flood Zone provisions of the Florida Building Code (2020-7th Edition) for both existing and new buildings; Federal Emergency Management Agency (FEMA) Regulations; and National Flood Insurance Program (NFIP) requirements. To support the above expressed opinion, we have completed and attached to this brief narrative, a Code Analysis Summary with all the applicable support information that include but are not necessarily limited to the Code references.

In our analysis, we found more than one criterion that prevent this facility from being renovated and made operational under existing Codes and Regulations. One is that to renovate this facility, the direct cost of construction (\$3,516,000 per DCSP estimate of probable construction costs dated May 13, 2021) far exceeds 50% of its market value of \$610,000 (land value excluded by rules), as determined by appraisal (J. Blake and Associates Report dated June 1, 2021), thus requiring the renovated facility to meet all Codes and Regulations when completed, which it would not. A second is that the renovation of this facility would involve every square foot of its area—pool, deck, bath house and pump house. As such, the renovation would be considered by the Florida Building Code both a Level 3 Alteration, and a Substantial Improvement to the buildings, and if the renovation cost exceeds 50% of the market value of the structure, the renovated facility must comply with the flood provisions, and it would not.

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POOL CODE ANALYSIS AND CONCLUSIONS

The bottom of the lowest horizontal member of the pool structure must be at Base Flood Elevation (BFE) + 1ft, which in Zone VE corresponds to an elevation of +11.00ft.

This requirement is based on a Flood Design Class 2 for this Building and Structure per American Society of Civil Engineers ASCE 24-14 and Coastal High Hazard Areas (Zone V).

Currently the grade elevation in the area surrounding the existing facility varies from a minimum +4.46ft. to a maximum of +5.80ft.

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The floor of the pool structure will be approx. a 1ft. Thick concrete slab (same as the existing), and the top of the pool wall perimeter gutter head (normally 1ft. above water level) will be approx. 4in (0.33ft.) above the adjacent deck (same as the existing).

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POOL DESIGN OPTIONS

THREE OPTIONS, RECOGNIZED BY
ASCE 24-14, SECTION 9.6.2, SATISFY
THIS REQUIREMENT:

The pool can be elevated so that bottom of the lowest horizontal structural member supporting the pool (and the pool itself) is at or above the required flood elevation, or

The pool can be designed and constructed to break away without producing debris capable of damaging nearby buildings, or

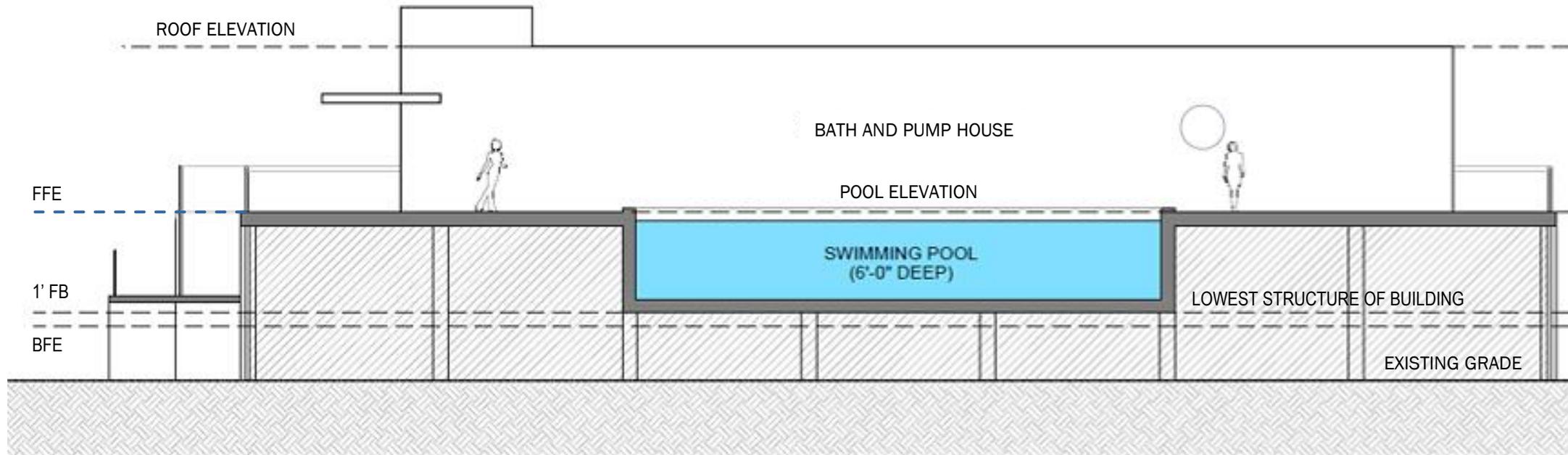
The pool can be designed and constructed to remain in the ground and not divert flow or waves that can damage nearby buildings.

POOL DESIGN OPTIONS

THREE OPTIONS, RECOGNIZED BY THE
AMERICAN SOCIETY OF CIVIL ENGINEERS
ASCE 24-14, SECTION 9.6.2, SATISFY THIS
REQUIREMENT:

The pool can be elevated so that bottom of the lowest horizontal structural member supporting the pool (and the pool itself) is at or above the required flood elevation, or

FB = Freeboard Elevation
FFE = Finish Floor Elevation
BFE = Base Flood Elevation

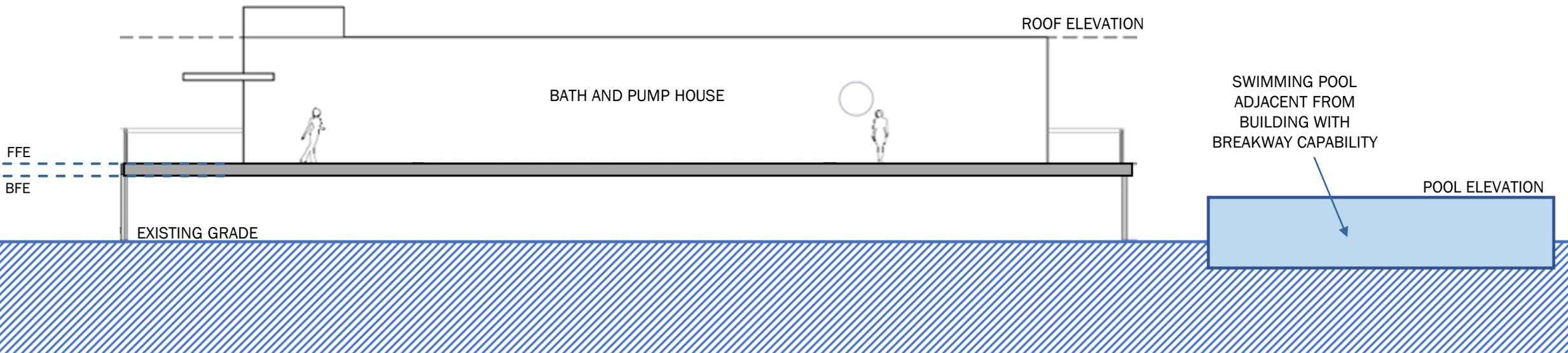


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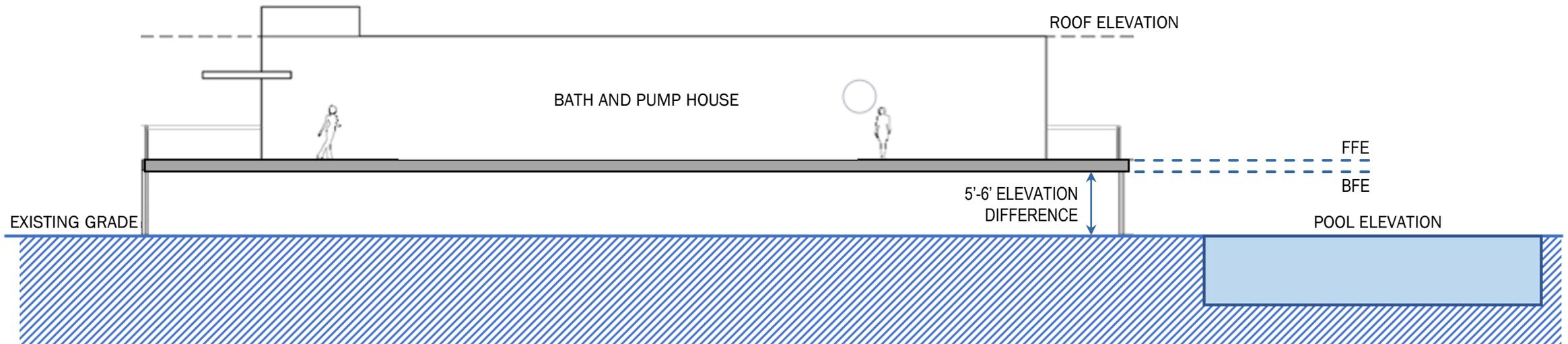
NOTE: This option is not feasible since the pool and the structure will be made of reinforced concrete, hence the pool cannot be a breakaway

POOL DESIGN OPTIONS

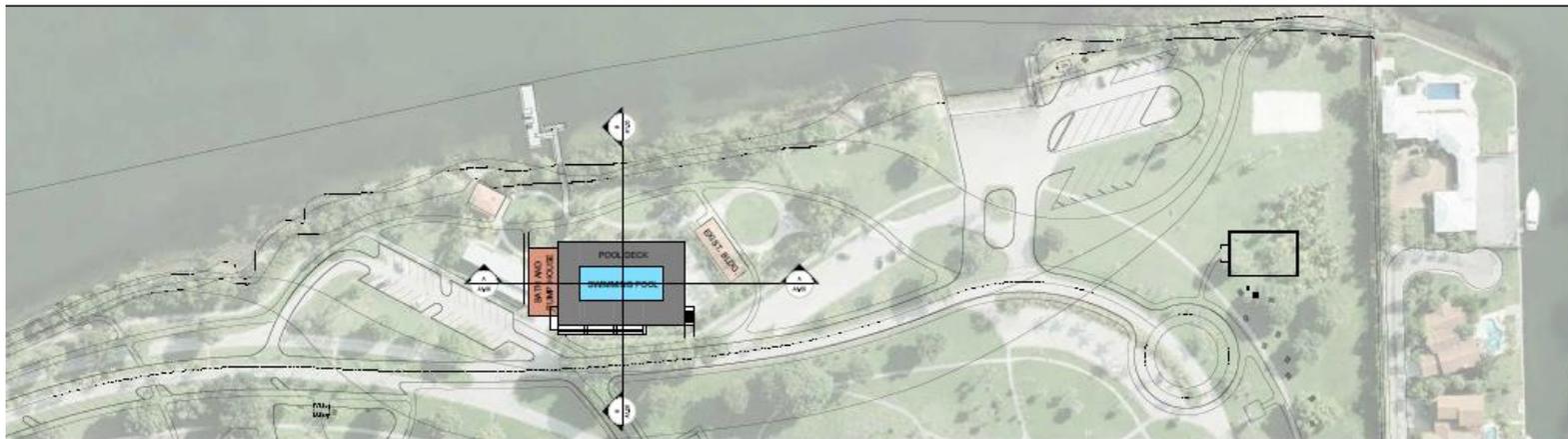
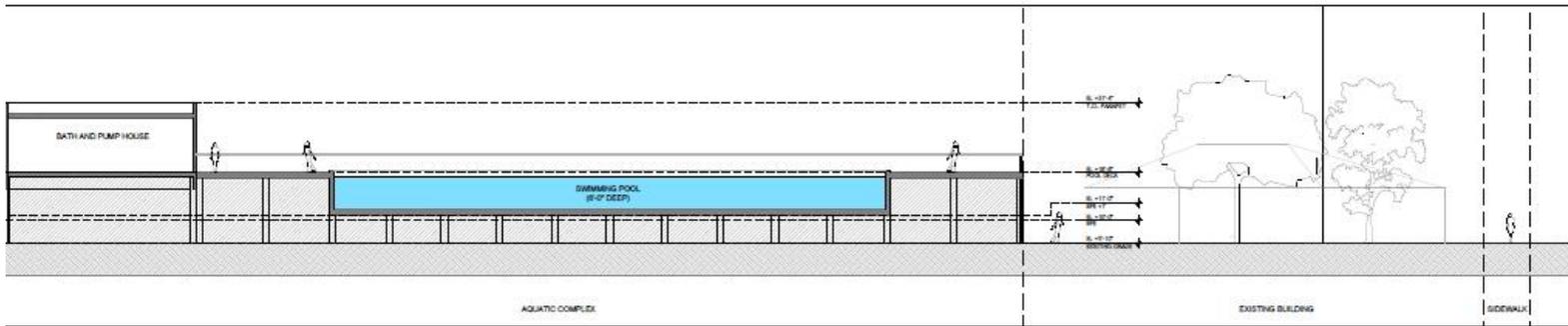
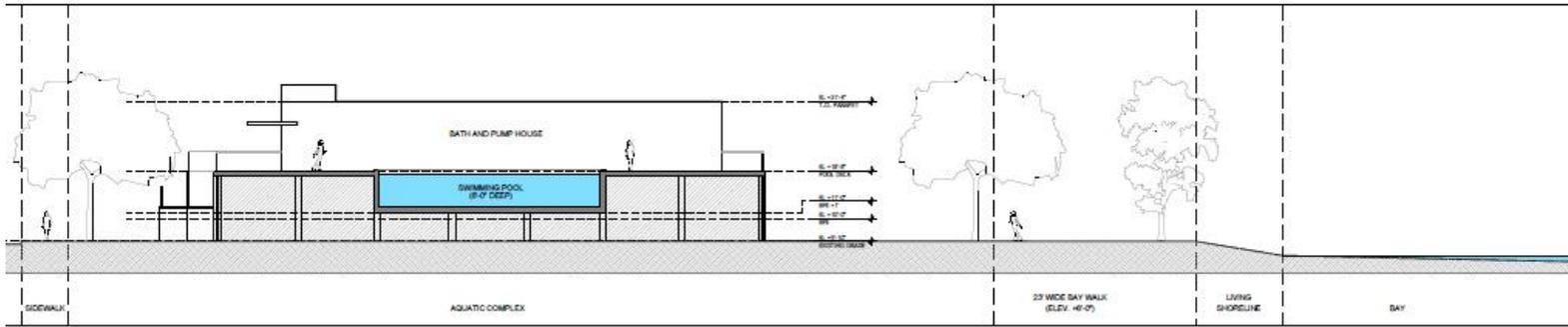
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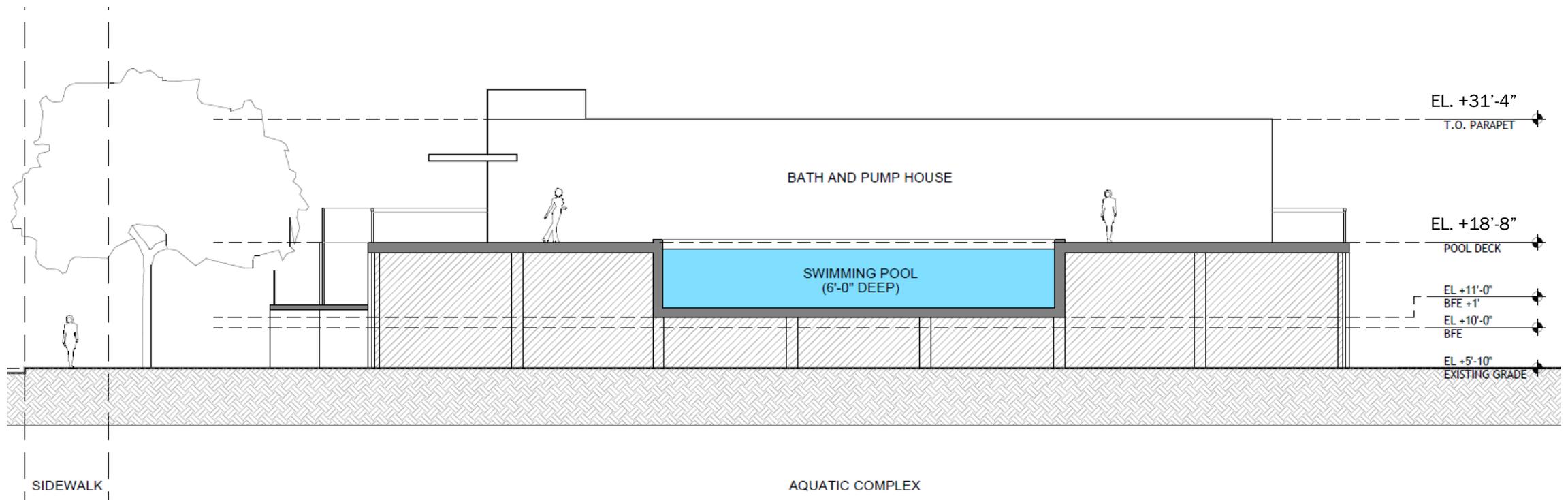
NOTE: This option is not feasible since the Restroom Building & the Pool Pump Building must be elevated to meet FEMA requirements



PROPOSED AQUATIC CENTER AT CURRENT LOCATION

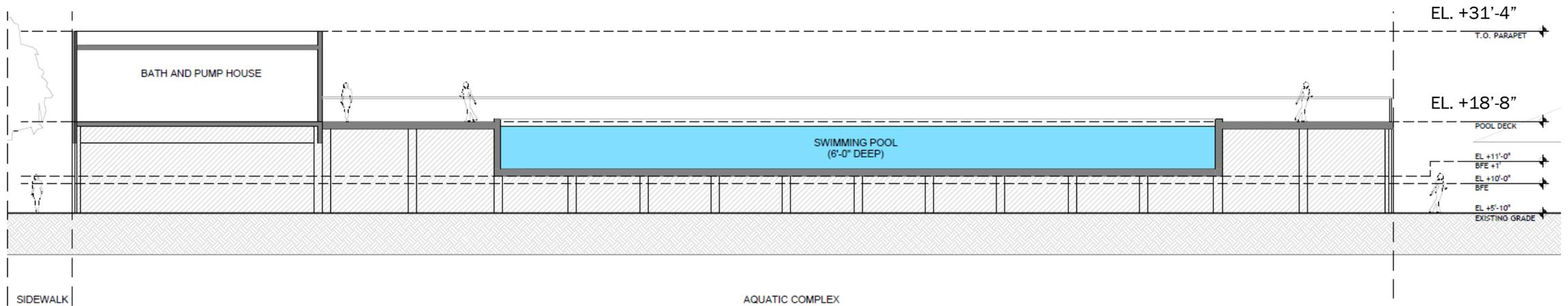
PROPOSED AQUATIC CENTER AT CURRENT LOCATION

SECTION A



PROPOSED AQUATIC CENTER AT CURRENT LOCATION

SECTION B





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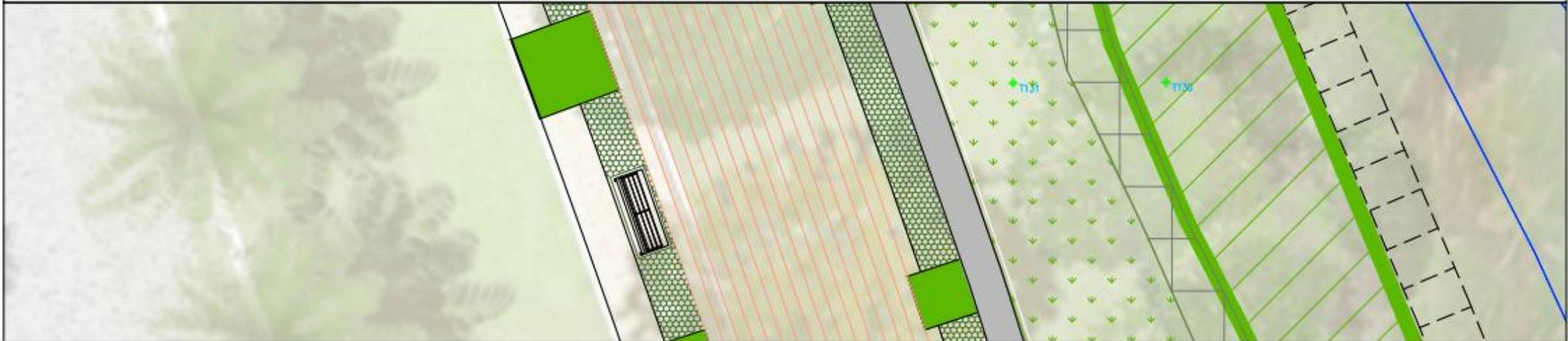
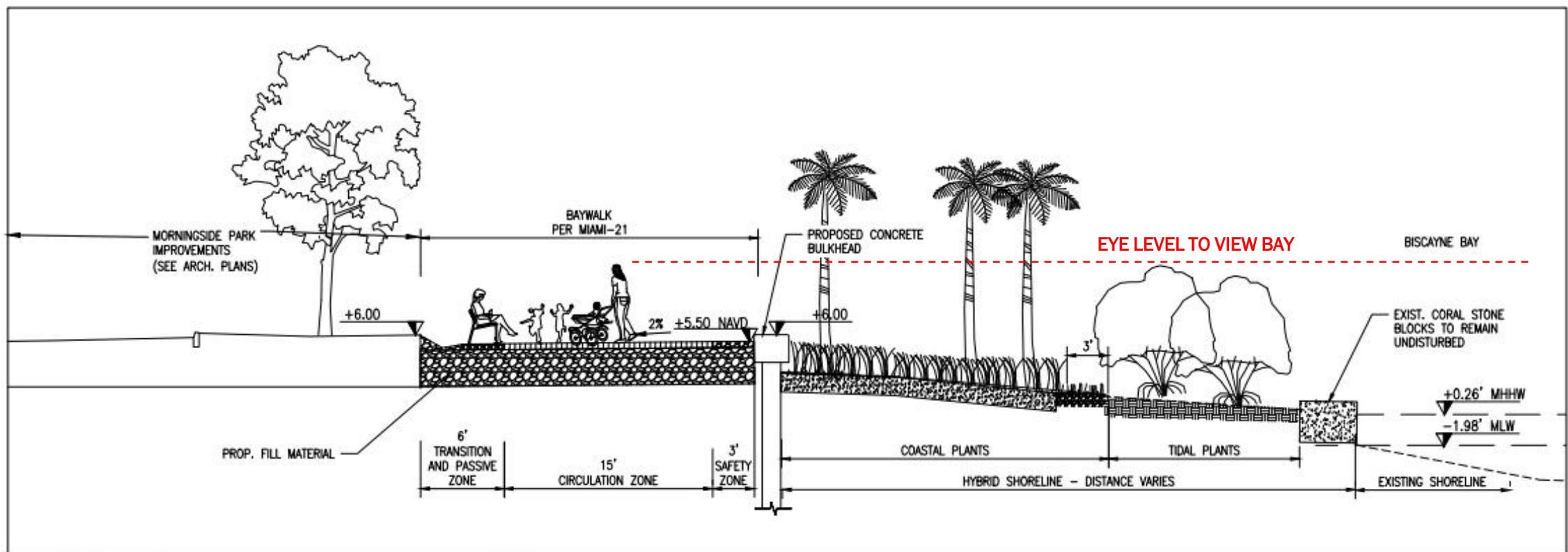
CONCEPT #1R

MORNINGSIDE PARK SHORELINE IMPROVEMENTS

KEY LEGEND

- 1 PEDESTRIAN ACCESS
- 2 21 FT BAYWALK @ ELEV.+5.50 NAVD
- 3 REMOVE EXIST. BULKHEAD CAP
- 4 EXISTING FOOT OUTFALL NOT TO BE DISTURBED.
- 5 EXISTING PARK OUTFALL TO BE RECONDITIONED UNDER A WOODEN PLATFORM
- 6 NEW HYBRID LIVING SHORELINE TIDAL POOL
- 7 NEW HYBRID LIVING SHORELINE TIDAL PLANTS
- 8 NEW HYBRID LIVING SHORELINE COASTAL PLANTS
- 9 EXISTING CORAL STONES TO REMAIN
- 10 BULKHEAD @ +6.00 NAVD
- 11 EXISTING MANGROVE TO REMAIN
- 12 EXIST. KAYAK RAMP
- 13 EXIST. KAYAK RENTAL CONCESSION AREA
- 14 EXIST. KAYAK FLOATING DOCKS.
- 15 PROPOSED 13 TRAILER PARKING WITH PERMEABLE PAVERS
- 16 ULTRALIGHT AIRCRAFT RAMP
- 17 2 STAGING DOCKS
- 18 2 BOAT RAMPS
- 19 STABILIZED TRAIL / TIDAL ZONE ACCESS
- 20 PERMEABLE PAVEMENT SYSTEM
- 21 RETAINING WALL AND PEDESTRIAN RAMP

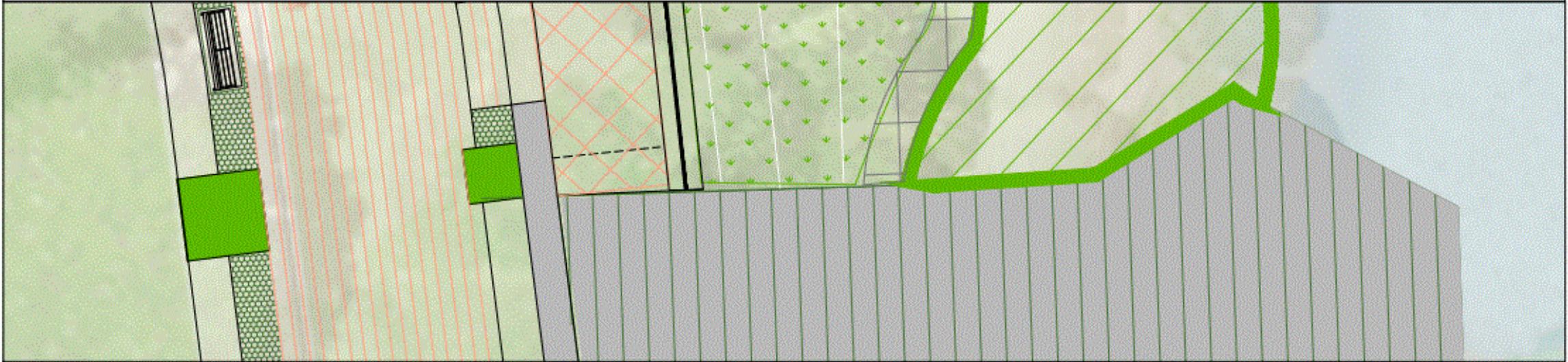
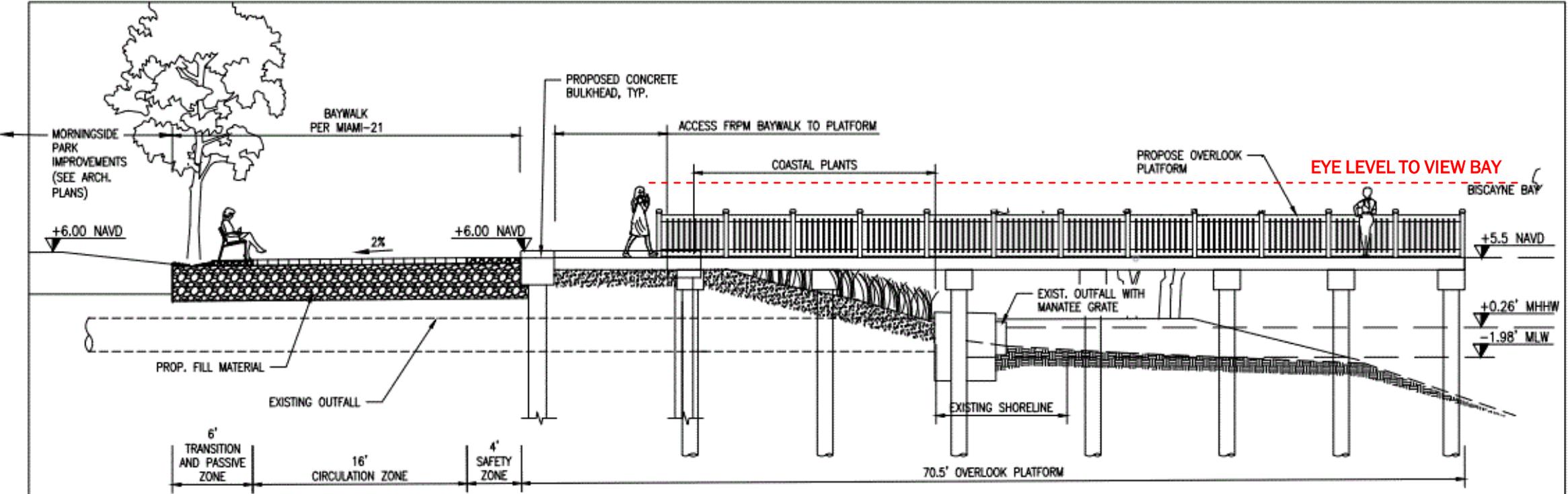




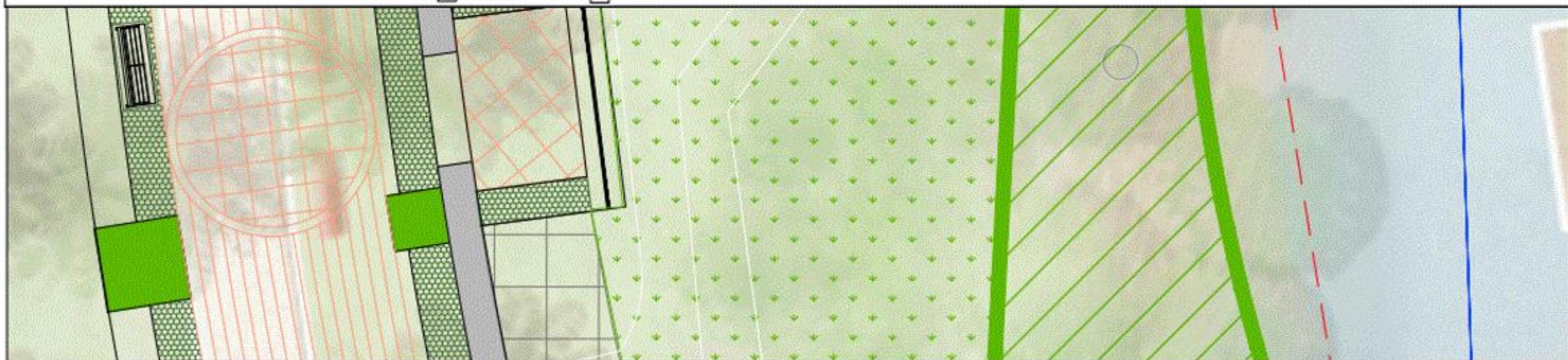
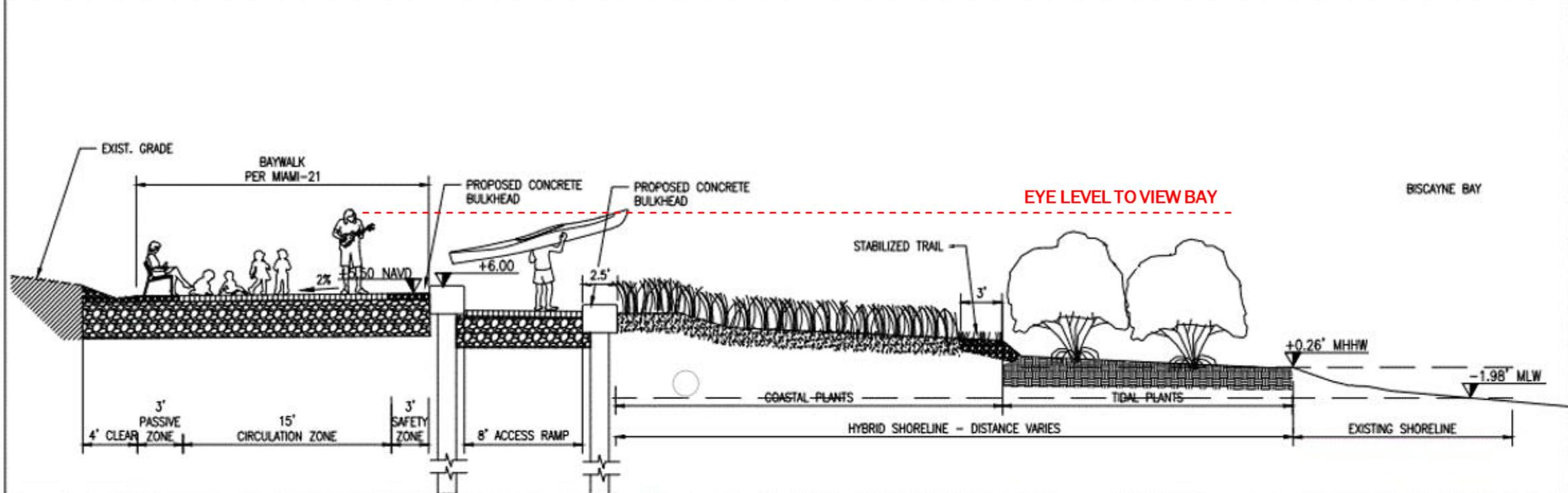
A

NORTH CONNECTION

1" = 5'



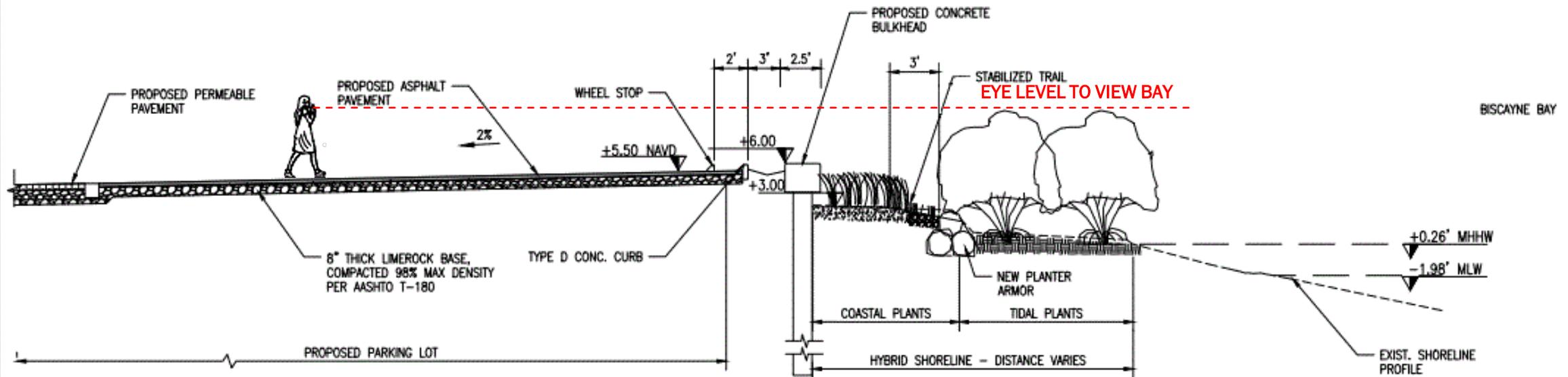

B TYPICAL SECTION
 1" = 5'



©

TYPICAL SECTION

1" = 5'



D

SOUTH OPEN SPACE

1" = 5'

EXAMPLES OF EXISTING SHORELINE COASTAL PLANTS



Hybrid Living Shorelines

BEFORE

TER

Chesapeake Maritime Museum, Miles River

The complex block contains a title 'Hybrid Living Shorelines' at the top. Below it, on the left, is a 'BEFORE' photograph showing a wooden dock and a building on a waterfront. On the right is an informational sign titled 'This is a living shoreline' with text and small images. Below the sign is a 'TER' label. At the bottom right is a 'AFTER' photograph showing the same waterfront property with a rocky bank and green vegetation. At the bottom left is the text 'Chesapeake Maritime Museum, Miles River'.

LIVING SHORELINES UNDER TIDAL INFLUENCES

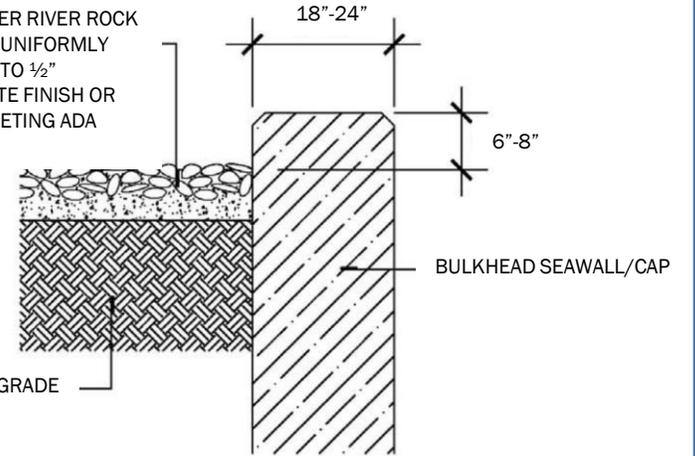


MIAMI 21

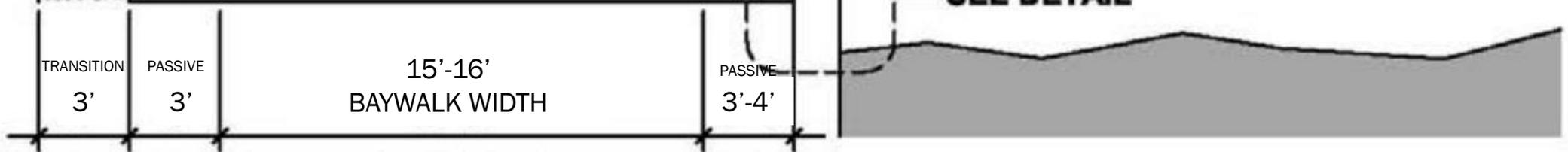
BAYWALK REQUIREMENTS



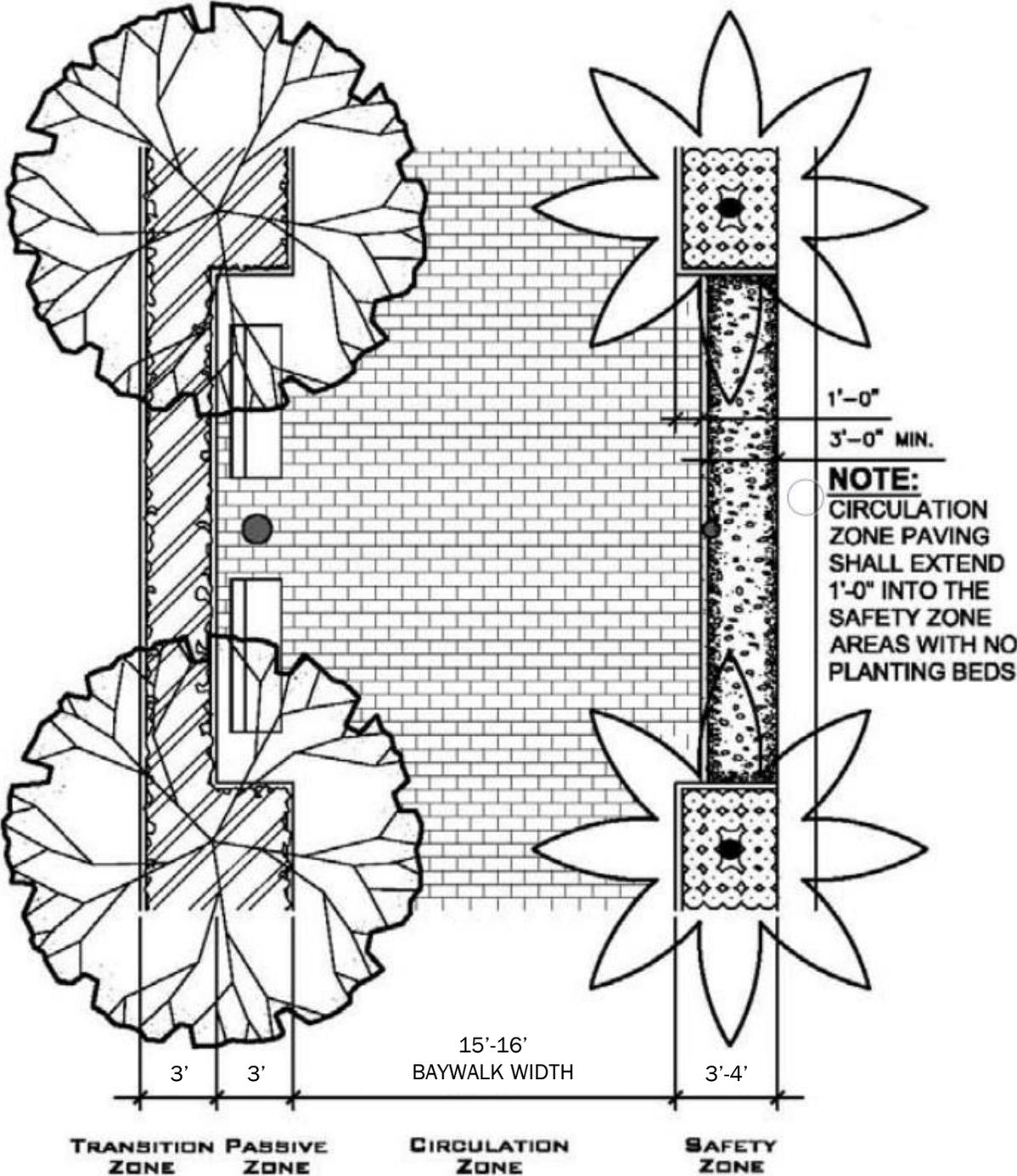
3/4" - 1-1/2" DIAMETER RIVER ROCK SET IN MOTAR BED, UNIFORMLY GRADED WITH A 1/4" TO 1/2" EXPOSED AGGREGATE FINISH OR EQUAL SURFACE MEETING ADA STANDARDS



DETAIL - SAFETY BUFFER ZONE
NOT TO SCALE



MIAMI 21 BAYWALK REQUIREMENTS





MIAMI OCI
BUILDING MIAMI FOREVER



THANK YOU

**QUESTIONS OR
COMMENTS**



FOR MORE INFORMATION, PLEASE CONTACT THE OCI COMMUNITY OUTREACH & ENGAGEMENT TEAM AT (305) 416-1280 OR E-MAIL US AT ASKOCI@MIAMIGOV.COM.

**DON'T FORGET TO VISIT THE PROJECT WEBSITE
AT: WWW.MIAMIGOV.COM/OCI. THANK YOU!**

